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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,319	07/18/2003	Wolfgang Kraemer	008388-6	2542

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WASHINGTON, DC 20004-2128

EXAMINER
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HUYNH, LOUIS K

ART UNIT	PAPER NUMBER
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3721

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/621,319	Applicant(s) KRAEMER ET AL. <span style="float: right;">CN</span>	
	Examiner Louis K. Huynh	Art Unit 3721	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-18 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☒ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/18/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 09/11/2002. It is noted, however, that applicant has not filed a certified copy of the Germany 10242077.7 application as required by 35 U.S.C. 119(b).

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 12 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not

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disclose a method of obtaining the *predefined* amount of the cold or heat storage medium after the carrier material is overfilled with the cold or heat storage medium.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the instant case, the predefined amount of the cold or heat storage medium cannot be determined because the rate of drying and or exhausting required complicated measuring devices; therefore, the claims are vague and indefinite for not setting forth the exact amount of the cold or heat storage medium to be overfilled and/or the exact amount of the cold or heat storage medium to be dried and/or exhausted.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4, 6, 7, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitchell (US 4,548,852).

With respect to Claims 1-4, 16 and 17, Mitchell discloses a method of vacuum packaging including the step of: placing a carrier material (10) in a flexible tubular container (15) (col. 6, lines 28-31); at least partially evacuating the container via an opening (16) on the flexible tubular

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container (col. 6, lines 43-45 & col. 5, lines 20-27); delivering a cold or heat storage medium (clean water) into the flexible tubular container (15) via the opening (16) (col. 6, lines 49-50).

With respect to Claim 6, the cold or heat storage medium (clean water) is removed from the flexible container (15) by draining through the opening and thereby creating partial vacuum (col. 5, lines 13-15).

With respect to Claim 7, the flexible tubular container (15) comprises an opening (16) at one end, and the opening is sealed after the step of delivering the cold or heat storage medium and the step of at least partially evacuate the flexible tubular container (15).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-5, 7, 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP'399 (EP 0914399) in view of Williams (US 3,804,077).

With respect to Claims 1, 2EP'399 discloses a method of forming a composite accumulator material including the step of: placing a carrier material (2) in a container (8); evacuating the container (8) with an evacuation means (10); delivering a cold or heat storage medium (6) with a filling means (Fig. 1) into the container to introduce the cold or heat storage medium into the carrier material (2). The method of EP'399 meets all of applicant's claimed subject matter but lacks the specific teaching of the container being composed of film material.

Williams discloses a hot or cold pack (11) that is capable of producing heat or cold and is capable of being applied to humans, animals or other objects (Fig. 3); wherein the pack (11) comprises a tubular flexible plastic container (13) that can be heat sealed to enclose chemicals disposed therein.

Since snorkel vacuum packaging using heat sealable flexible container is well known in the art and the tubular flexible container of Williams is capable of being used in such method, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, to have modified the method of EP'399 by having provided a tubular flexible plastic container for holding the composite accumulator material, as taught by Williams, so that the composite accumulator material can be flexibly applied to humans, animals or other objects to remove heat therefrom or add heat thereto.

With respect to Claim 3, the modified method of EP'399 would have utilized the snorkel vacuum packaging method, wherein an evacuation tube is coupled to the open end of the tubular flexible plastic container as is well known in the art.

With respect to Claims 4 and 5, EP'399 teaches that the heat or cold storage material (6) is delivered into the carrier material (2) by vacuum impregnation (page 9, line 26-30) and the cold or heat storage medium (6) delivered via the open end of the container; therefore, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, to have coupled the filling means to the open end of the tubular plastic container so that the evacuation of the tubular plastic container, at the same time, extracts the cold or heat storage medium into the carrier material in accordance with the teaching of EP'399.

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With respect to Claims 7 and 18, the hot or cold pack of Williams is completely sealed so that the chemical contained therein would not leak during storage and/or use; therefore, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, to have sealed the open end of tubular plastic container of the EP'399 modified method, and such sealing are usually done by thermo-welding as is well known in the art.

With respect to Claim 9, it is a common practice to manufacture product of the same size for the obvious purposes of handling, transporting and displaying; therefore, the size, shape and weight of the carrier material should be determined in the process of manufacturing in order to produce uniform accumulator material of the EP'399. And such determination should be done prior to delivering the cold or heat storage medium.

With respect to Claims 10-13, EP'399 on page 9, lines 26-58, teaches various ways of forming the accumulator, wherein a predefined amount of the cold or heat storage medium would remain with the carrier material in accordance with the method of EP'399. Regarding the use of a metering device as required in Claim 11, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, to have metered the predefined amount of the cold or heat storage medium since this is the most accurate method of filling. Regarding the overfilling and then drying or exhausting the container to obtain the predefined amount of the cold or heat storage medium in the carrier material, EP'399 teach a similar method on page 9, lines 26-58.

With respect to Claims 14 and 15, EP'399 teaches that the carrier material (2) is graphite matrix material.

With respect to Claims 16 and 17, EP'399 teaches that the cold or heat storage medium is a phase change material and the PCM is water (pg. 8, line 55) or paraffin (pg. 9, lines 19-21).

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP'399 (EP 0914399) in view of Williams (US 3,804,077) as applied to Claim 1 above; and further in view of Vaughn (US 2,613,487).

The modified method of EP'399 meets all of applicant's claimed subject matter but lacks the specific teaching of the filling means comprising at least one injection needle for delivering the cold or heat storage medium by puncturing the container of film material.

However, using needle for delivering a medium by puncturing an outer container of film material is well known in the art such as one disclosed in the Vaughn reference. Since the carrier material (2) of the EP'399 modified method is an expandable/compressible graphite material (page 8, lines 39-46) which is puncturable; therefore, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, to have further modified the method of EP'399 by having used needle for delivering the cold or heat storage medium into the carrier material by puncturing the tubular plastic container of the EP'399 modified method, as taught by Vaughn, so that the filling means does not interfere with the sealing of the open end of the tubular plastic container.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure has been cited on form PTO-892 along with the applied prior art.



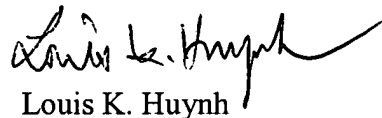
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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis K. Huynh whose telephone number is (703) 306-5694.

The examiner can normally be reached on M-F from 9:30AM to 5:00PM.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi I. Rada can be reached on (703) 308-2187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Louis K. Huynh  
Patent Examiner  
Art Unit 3721

July 27, 2004